

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JI-GUANG ZHANG

Appeal 2006-2394
Application 10/047,407
Technology Center 1700

Decided: September 29, 2006

Before GARRIS, KRATZ, and JEFFREY T. SMITH, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the Examiner's final rejection of claims 1-16.

We have jurisdiction pursuant to 35 U.S.C. § 134.

Appellant's invention is directed to a method for packaging thin film batteries and the packaged product formed by the method. According to Appellant (specification, p. 7), packaging foil is heat sealed to the battery cell, itself. Gases located between the battery and the packaging foil prior to such sealing are driven out by the heat sealing to protect the battery cell from continued exposure thereto. *Id.* Claim 1 is illustrative and reproduced below:

1. A method of sealing a battery cell having a top surface, a bottom surface and peripheral edges, the method comprising the steps of:

(a) positioning a first layers of packaging foil over the top surface of the battery cell;

(b) positioning a second layer of packaging foil over the bottom surface of the battery cell; and

(c) heat sealing the first layer of packaging foil to the top surface of the battery cell, heat sealing the second layer of packaging foil to the bottom surface of the battery cell, and heat sealing the first layer of packaging foil to the second layer of packaging foil about the periphery of the battery cell.

The sole prior art reference relied upon by the Examiner in rejecting the appealed claims is:

Xing US 6,284,406 B1 Sep. 4, 2001

Claims 1-5, 7-11, and 13-15 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Xing. Claims 6, 12, and 16 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Xing.

OPINION

Having considered the record of this application, including the arguments advanced by both the Examiner and Appellant in support of their respective positions, we find ourselves in agreement with Appellant's

position in that the Examiner has not met the burden to show, *prima facie*, that the prior art, as applied, renders the subject matter of the so rejected claims either anticipated under 35 U.S.C. § 102(e) or obvious within the meaning of 35 U.S.C. § 103(a). Accordingly, we reverse the rejections advanced by the Examiner. Our reasoning follows.

Concerning the Examiner's anticipation rejection of claims 1-5, 7-11, and 13-15, we observe that each of independent claims 1, 7, and 13 require, *inter alia*, heat sealing a packaging foil to a surface of a battery cell.

Xing discloses a method for packaging a battery wherein a flexible laminate, including a metal layer and a sealing layer, is employed. The battery cell and laminate are placed in contact with each other with the cell in contact with the adhesive and sealant layer of the laminate. The flexible laminate is dimensioned to extend beyond the battery edges and is folded over the battery to contact itself along three peripheral edges that extend beyond the battery cell periphery. Pressure and heat are applied to these peripheral edges of the laminate such that an adhesive in the sealing layer of the laminate softens and bonds itself together; that is, the laminate bonds to itself at the peripheral edges thereof that extend beyond the battery cell. *See* column 4, line 42 through column 5, line 5 and drawing figures 3A-C and 4 of Xing.

The Examiner goes to considerable lengths in the Answer in attempting to ascribe a broad enough interpretation to Appellant's claimed method such that the claimed method would be understood to read on the method of Xing. However, the Examiner's effort falls short in that all of the rejected claims clearly require that the packaging foil is heat sealed to the

battery cell surface, a step that Xing does not expressly require. In this regard, Xing makes plain that the heat sealing of the laminate, as described therein, is a heat seal of the laminate to itself, not to the battery cell. The Examiner's suppositions and characterizations (see, e.g., the paragraph bridging pages 11 and 12 of the Answer) as to the manner and extent of the heat sealing of a laminate to a battery cell that may be within the scope of the appealed claims is not persuasive of the Examiner's anticipation position. This is because a *prima facie* case of anticipation of the here claimed subject matter, including a battery surface to foil heat sealing, can not be based on the referred to description of laminate to laminate sealing in the foil of Xing.

In addition, the Examiner advances an anticipation position based on an assertion of inherency. The Examiner notes the contact of the adhesive of the flexible laminate of Xing with the battery cell and the heat sealing of the laminate to itself, as described in Xing. Based thereon, the Examiner maintains that the surface of the battery of Xing, of necessity, must be directly heat sealed to the laminate as a result of the contact and the heating of the laminate at peripheral edges for sealing the laminate to itself. This is so, according to the Examiner, in that the battery surface in contact with the laminate adhesive layer would also be subjected to heating. *See, e.g,* Answer 4-5, 13.

The Examiner, in relying on a theory of inherency, must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art. *See In re Robertson*, 169 F.3d

743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Here the Examiner has not provided persuasive support for an inherency theory. In this regard, the Examiner has not fairly established that the manner of applying heat and pressure to laminate peripheral edges that extend beyond the battery cell of Xing is of such a type and character, and that the adhesive on the sealant layer of the laminate is such, that a heat sealing of the laminate to a surface of the battery cell of Xing will necessarily occur. Inherency cannot be established based on conjecture and/or probabilities or possibilities. *See In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981).

On this record, we will not sustain the Examiner's anticipation rejection of claims 1-5, 7-11, and 13-15.

The Examiner's separately presented anticipation and/or obviousness rejection of product claims 6, 12, and 16 over Xing fairs no better. This so because the Examiner bases both of these rejections on substantially the same anticipation arguments that we found to fall short of making out a *prima facie* case of unpatentability for the reasons set forth above and in the Brief. We agree with the Examiner that the patentability of product-by-process claims 6, 12, and 16 is considered based on the product itself; however, the method steps that serve to describe the product made cannot be dismissed. Here, it is manifest that the products of claims 6, 12 and 16 require a battery cell with a surface thereof sealed to a packaging foil. The Examiner simply has not made the case by the presentation set forth in the Answer that Xing anticipates such a product. Nor has the Examiner otherwise offered a persuasive alternative explanation as to how Xing would have suggested a product that corresponds to the claimed product.

It follows that we will not sustain the Examiner's rejections of claims 6, 12, and 16 on this record.

CONCLUSION

The decision of the Examiner to reject claims 1-5, 7-11, and 13-15 under 35 U.S.C. § 102(e) as being anticipated by Xing is reversed. The rejection of claims 6, 12, and 16 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Xing is reversed.

REVERSED

clj

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